Forestry

Material and Technical Groundwork Concluded in China Affcrestation - additional progress in spring afforestation activities

Spring afforestation activities are being implemented again this year in the northern and southern regions of China.

In Fukien Province, shelter belt forests and charcoal and fuel wood forests have been planted along the coastal areas. In the mountainous areas, industrial wood forests of tea oil, tung oil, tea and bamboo were planted with emphasis on the build up of industrial forests. With the additional planting of trees along the sides of the roads and around the villages, the afforestation areas in Fukien Province in early March covered more than triple the areas covered by early March a year ago. In early 1965, aerial afforestation was successfully accomplished in the Wu-i Shan forest area in the northern part of Fukien Province and, this year, aerial afforestation was conducted on 4,000 hectares of land in Chien-ning Hsien in the northwestern part of Fukien Province.

Spring afforestation in Hupeh Province, practically completed by early April, comprised of afforestation areas of over 200,000 hectares and 150,000,000 "side-plot" tree plantings, showed a huge increase over the afforestation acreage for 1965. Industrial forests were appropriately expanded, primarily with industrial wood trees, in the mountainous and hilly areas; charcoal and fuel wood forests were appropriately expanded, primarily with industrial wood trees, in the plains areas; pampas grass and willow trees were appropriately planted along the lake shore areas to solve the problems of firewood and shifting sands; and industrial forests were planted alongside transportation lines and river banks.

Cryptomeria forests were expanded in Huang-kang, En-shih, Hsien-ning and Hsiao-kan.

The 1966 afforestation goal for Anhwei Province, which was more than double the goal for 1965, was attained 15 days earlier than 1965. This year, fast-growing tree seeds and conventional seeds were planted in various areas. Trees were planted around houses and villages and shelter belts were planted around the farmlands in the Huai-pei area. About 2,700 hectares of the more than 5,300 hectares of the sandy former river bed of the Yellow River in Tang-shan Hsien were afforested this year. Industrial forests and industrial wood forests were greatly expanded in the mountainous areas in the south. Charcoal and fuel wood forests predominate in the hilly areas. 6,700 hectares of bamboo were planted in various areas. Many of the people's communes in the hilly areas of Chiang-huai are also beginning to plant bamboo/ and more than 6,000,000 trees were planted along both banks of the Yangtze and Huai Rivers.

Between last year and the spring of this year, over 3,000,000 tall trees and over 10,000,000 shrubs were planted on both sides of the more than 3,000 kilometers of vehicular roads in Kiangsu Province to exceed the original plans by a huge margin. Since the liberation, "verdancification" has been completed on about 1/3 of the vehicular roads in Kiangsu Province. Furthermore, over 67 hectares of seedlings are being cultivated for this road "verdancification" program.

Over 6,000,000 tall trees and fruit trees were planted in Shanghai this spring. There were only 18,000-odd/roadside trees in Shanghai before the liberation but now there are over 100,000 and trees are also planted in all the 150-odd vacant lots within the city.

Spring afforestation in Hopeh Province covers over 40,000 hectares,

which is an increase of 1/3 in the acreage of afforestation areas and "side-plot" tree plantings over the same period a year ago.

Afforestation activities have been developing extensively from the city proper to the suburbs in Peiping. Within the city of Peiping, over 2,000 special members of "verdancification" units and 70,000 others have participated in compulsory labor to dig over 1,000,000 holes and to plant over 100,000 purple sophora japonicas around roads and buildings. Plans are also under way this spring to plant over 500,000 trees - poplars, willows, acacias, oil pine, white-bark pine and cypress - along the Peiping-Tientsin Railway and over 600,000 trees [of the same varieties] along both banks of the Peiping-- Mi-yun Waterway.

Additionally, 1,000,000 trees have been planted to date in Tibet to raise the total area under afforestation to about 670 hectares. In the Ho-t'ien Special District in Sinkiang, over 7,000,000 trees were planted this spring in 10-odd days around farmlands and the Gobi Desert.

Tree Plantings in One Year Equivalent to 10 Times the Number of Trees Planted During 35 Pre-Liberation Years

China's afforestation activities are expanding yearly. With the development of agricultural collectivization, tree plantings have increased from several hundred thousand hectares per year to one million several hundred thousand hectares per year. The number of tree plantings in 1963 covered an area six times larger than the total area covered during the 35 years from 1911 through 1946. The acreage was further increased in 1964 and, in 1965, the number of tree plantings covered an area 10 times larger than the total area covered during the aforementioned 35 years.

In the olden days, the forests in China were ~~denuded~~ depleted through indiscriminate

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deforestation, particularly by the imperialist countries during the Kuomintang regime. Japan alone denuded/depleted 2,000,000 hectares of forests in the three provinces of Northeast China and destroyed the flourishing and famous forests in Ch'ang-pai Shan and the Lesser Khingan Mountains. Trees were completely denuded/depleted and verdant mountains were reduced to barren mountains in many areas. Thus, at the time of the formation of New China, the forest acreage of China covered a mere 7.9% of the total land mass of China, 270,000,000 hectares consisted of waste land and barren mountains, and the soil was devastated by floods, draughts and wind damage.

But now, new forests are taking root in the various areas throughout China and a transfiguration is taking place over the mountains and rivers in many of these areas. In Peiping, for example, over 15,000,000 trees were planted between 1949-1964 and they have reportedly reduced the intensity of the fierce dust/storms that traditionally invades Peiping in the spring. From 1951-1954, Peiping was reportedly harassed by fierce dust storms every third day during the spring. From 1959-1962, the frequency was reportedly reduced to once every eight days and it has reportedly been further reduced in recent years. Reforestation is also assuming a major role in soil/erosion control, providing shelter from wind and sand, weather control, decreasing natural calamities, guaranteeing agricultural production, and in promoting production in forestry, stock-farming, fisheries, industry and subsidiary industries.

In the vast region of wind and sand encompassing the western sectors of the three provinces in Northeast China, the Pa-yen-tiao-erh Meng District in the western sector of Inner Mongolia, the Manass Reclamation District in the Sinkiang Uighur Autonomous Region, the northern sector of Shensi Province, the Ho-hsi Corridor in Kansu Province, the eastern sector of Honan Province

and the western sector of Hopeh Province, huge sand breaks and various types of farmland shelter belts have been constructed. They form a strong network of shelter belts to resist wind and sand, and to protect several million hectares of farmland and grassland. Before the liberation, these areas consisted of vast deserts and barren waste lands as far as the eye could see. Year after year of swirling winds and dust clinging in the air brought untold sufferings to the farmers. Today, the shelter belts have weakened the strength of the winds, the shifting sands have been stilled somewhat, several million hectares of farmland have been seeded and cultivated, varieties of crops are growing rapidly and the yield is rising. Soil improvement due to afforestation, the development of water conservation projects and the gradual increase in the varieties of agricultural crops have made it possible for these areas to produce huge quantities of wheat, cotton and paddy rice, which had hitherto been neglected in many of the windy and sandy areas, and to steadily raise the living standards of the inhabitants of these areas.

[Hunan]

History of Forestry in Hupeh Province

The average yearly acreage afforested in Hunan Province during the 10-odd years following the liberation was more than 37 times larger than the total acreage afforested during the Kuomintang regime. The mountainous areas as well as the traditionally barren and hilly Han-shou and Lin-li Hsiens bordering Lake Tung-t'ing are no longer completely barren; their timber reserves have been greatly expanded. In addition to the afforestation of barren and stony mountains, industrial wood forests, industrial forests, charcoal and fuel wood forests, fertilizer forests and feed forests are being planted.

After the liberation, over 100 state forestry farms have been established in various areas hitherto called barren areas. These mountain forests, covering over 670,000 hectares, are playing a major role in construction and in the development of mountainous areas. The state-operated Mang-shan Forestry Farm has been in operation less than 10 years but it already covers over 8,700 hectares under afforestation and silviculture including several hundred hectares of industrial forests, fruit orchards and medicinal plants. A newly constructed network of forest roads crisscross the farm and newly constructed motor vehicle roads total several tens of kilometers. This farm, one of many in Hunan Province, is a modern forstry base containing processing plants, a hydroelectric power plant, housing for the workers, schools, hospitals and shops.

Group operated forestry farms have also developed rapidly. They plant trees such as bamboo and paulownias between the food crops and in certain areas they are busily engaged in the planting of industrial crops and subsidiary products. In connection with the more than 670-hectare cryptomeria forest planted by the forestry farm of the Chin-lung-shan People's Commune, the earlier planted trees will be ready for cutting in another 4-5 years; those planted later have grown to the height of 5-6 meters within several years and some are over 10 meters tall.

Forest fires often occured during the fall and winter under the Kuomintang regime because they neglected to enforce afforestation or preservation measures but, after the liberation, the People's Government issued forest preservation orders and directives and established forest preservation organizations and facilities. In Chiang-hua Hsien alone, the government constructed a firebreak 10 meters wide and 3,400 kilometers long, and established 580 fire lookout towers. Huge efforts were exerted in 1965 to exterminate noxious forest insects including the cockchafer

of over 100 airplanes and over 1.8 million workers to exterminate pine caterpillars.

3,000 Active State Forestry Farms

In this manner, New China is promoting mass afforestation programs, developing positive state afforestation programs, and establishing state forestry farms to create a new timber forest base. During the past 16 years, China has established over 3,000 state forestry farms (more than 100 times the number of forestry farms established under the Kuomintang regime) and cultivated several million hectares of timber forests. In Shansi Province, for example, Chin-sha-t'an in Yen-pei Special District had been devastated by successive wars prior to the liberation and its land mass covering several hundred thousand hectares had been transformed into a huge sandy wasteland. After the liberation, 16 state forestry farms and 11 state nurseries were established in this area. Joining forces with the inhabitants of the seven hsiens in this area, new forests were planted on 176,000 hectares throughout this area to transform both sides of a 50 kilometer stretch of the Great Wall of China into ribbons of forests. These forests are growing and, within the past several years they have produced over 200,000 square meters of timber.

Progress in the Development of Forest Areas

In connection with the establishment of forest farms, positive progress is being made in the development of existing forests as well as afforestation. In the forest areas of Northeast China and Mongolia, largest timber producing bases in China, that produces more than 2/3 of the total volume of timber produced by China annually, various construction programs are being implemented

these past several years
[illegible]/to take advantage of the full potential of these timber bases. Considering, for example, the [illegible] construction of roads for transporting the timber out from these forest areas, there existed prior [illegible]/to 1963 a mere 0.7 kilometer of roads per each hectare of timber ready to be transported out from these forest areas. This ratio was increased to 1.1 kilometer per hectare in 1964. The basic construction obligations for 1965 were greatly [illegible]/ expanded and construction of timber transportation roads (including forest railroads [illegible] and motor vehicle roads) attained the total length of over 2300 kilometers, a 23.5% increase over 1964. A large percentage of these transportation roads were constructed to transport out the [illegible] cut timber from the newly established forestry farms or to develop new timber producing bases. A forest railroad [illegible]/was constructed in 1965 [illegible] from the south side to the north side of the Lesser Khingan Mountains by the Yu-hao Forestry Bureau of the [illegible] I-ch'un Forest Area to develop two new forestry farms. This railroad [illegible]/construction project required on-the-spot digging and bridge construction by several tens of thousands of forest area construction workers deep in the mountainous forests of the Lesser Khingan Mountains and the Ch'ang-pai-shan Forest Area.

Simultaneously, [illegible] work was conducted on timber processing, forest product chemical industries, power transmission lines, a small power plant, a large seed warehouse and housing for the workers.

To promote the basic construction of these forest areas, the various forestry bureaus of the Northeast China and Mongolia [illegible] Forest Areas bolstered their basic construction specialist teams by assigning one out of four forestry worker to basic construction in 1965. Through the efforts exerted by these forest bureaus during the past 2-3 years, high levels of mechanization and semi-mechanization have been attained in these [illegible] forest areas. The three mechanization teams assigned to oversee all the [illegible]

construction work on timber transportation roads within all the forest areas have accounted for about 1/3 of the overall work on road construction/ over the past year. In the swampy forest area worksites, where the use of large machinery is unsuitable, the workers are constructing roads by transporting gravel via aerial ropeways and rubber-wheeled pushcarts.

The primeval forest (Shen-nung-chia) that straddles three hsiens - Hsing-shan, Pa-tung and Fang - in the northern sector of Hupeh Province along the middle reaches of the Yangtze River is being developed since 1965. Polar cryptomerias piercing the clouds, priceless tropical camphor trees and, fast-growing Hua-shan pine trees and countless varieties of medicinal plants have been lying dormant in this primeval forest for a 1,000 years.

Machinery and Equipment in Support of Forestry Development

Silvicultural machinery industries are developing in various areas in step with the developments in forestry. Since 1958, the Small Machinery Plant and the Handicraft Industries Cooperative in Kiangsu Province, one of the provinces in which silvicultural machinery plants are flourishing, reorganized and expanded their facilities and developed into imposing specialized plants. In 1965, the silvicultural machinery industries in this province manufactured over 20 varieties of machinery. They are already being widely used in the forest areas of over ten provinces and regions such as Kirin, Heilungkiang, Inner Mongolia, Yunnan, Hupeh and Szechwan.

The aerial forest clearing ropeway manufactured by the Soochow Silvicultural Machinery Plant is a type of combine suitable for use in the felling of forests in the high mountainous areas in southern China. It is suitable for clearing forests cradled between mountains at altitudes of 1,000-4,000 meters above sea level. Its capacity of 2-3 tons per

trip is 8-9 times more efficient than forest clearing with manual labor. Silvicultural machinery manufactured by the Soochow Silvicultural Machinery Plant also includes seven other types of forest transportation vehicles including trucks for transporting logs, flatcars and oil pipe vehicles [sic].

The dual winch (2-ton hoisting capacity) manufactured by the Ch'ang-chou Silviculture Machinery Plant is also a vital piece of equipment for loading, binding and floating logs downstream. This plant also manufactures timber clearance and transportation machinery such as manual lever-operated winches, lightweight winches and single-strand revolving aerial ropeways.

The Chen-chiang Silvicultural Machinery Plant specializes in the manufacture of afforestation machinery such as combination seedling and seed planters, horse-drawn ploughs for digging up seedlings, and mechanical forest weeders. The mechanical forest weeders are used to intertill the seedlings and to appropriately remove the weeds in large forestry farms in order to accelerate the growth rate of the seedlings. The weeders are aligned in groups of threes or fives and pulled by one tractor. They are capable of removing weeds from over two hectares of forestland in one hour.

The dibblers, which were successfully trial manufactured in 1965 and are being manufactured regularly at the present time by the T'ai-chou Silvicultural Machinery Plant , weigh a mere 15 kilograms with power equipment attached and they can be conveniently operated by two persons. They are capable of dibbling over 400 holes (about 30 cm in diameter and about 1 meter deep) per hour and they can be used along the sides of mountains, river banks and roadsides.

The wooden two-bladed afforestation machinery manufactured in the Yen-pei District of Shansi Province is being used for large-scale

afforestation. Drawn by the Tung-fang-hung Model 54 Tractor, this machinery is capable of digging ditches, planting seedlings and refilling the ditches in one movement. With the use of this machinery, 4 persons can afforest 6-8 hectares of land in 20 hours. This method is 50-60 times more efficient than manual labor and it produces a neater job. This is an extremely convenient means of promoting and managing mechanization.

A new saw is being delivered in a steady stream to the forest areas in Inner Mongolia, Northeast China, Southwest China and East China by the Liu-chou Machinery Plant in the Kwangsi Chuang Autonomous Region. This powerful gasoline-motor saw Model 651 weighing a mere 11.5 kilograms is capable of felling huge 450 cm diameter trees. It is capable of reducing to a large extent the work efforts of the wood cutters. In 1965, this plant increased the production of these saws to over 1,000 more than the production figure for 1964. At the present time, these saws are only being manufactured by two plants in China - the Liu-chou Machinery Plant and the Ch'ang-ch'un Power Machinery Plant.

Since the beginning of this year the Shao-wu Automobile Repair Plant of the Fukien Forest Industry Bureau has been manufacturing truck mounted hydraulic jib cranes for loading and unloading timber. Moreover, the forest farms in the various areas have been exerting their efforts toward mechanization in forest planting, control, timber selection, carry out and processing. Mechanization in "carry out" is practically completed in most of the areas.

The 36 state-operated and mechanized forest farms located in the western sector of the sparsely populated, wind and sand swept three provinces of Northeast China have afforested about 50,000 hectares of land, some since 1953 and the majority since 1958. These forest farms own a combined total of over 200 tractors (combines) and over 1,400 pieces

of huge equipment such as tree planters, weeders and surfacers. Mechanized afforestation increased the life expectancy of trees 10-20 percent over manual afforestation and accelerated their growth rate. For example, hand-planted poplars grew 0.8 meter in one year whereby the machine-planted poplars grew 1-1.5 meters.

Development of New Trees and Planting Techniques

In line with developments in mechanization, significant prospects in silviculture include the discovery of new seeds and the propagation of planting techniques. Noteworthy of the new seeds being propagated are the Sha-tsao, a type of silverberry called the "Desert Hero" (good life expectancy; it will grow in the desert, where the surface temperature reaches 70 degrees Centigrade; it lowers the water level of alkali soil; it decreases the salt content of the soil; it improves the soil; it grows fast; its seedling will grow 0.5-1 meter in one year; and it will bloom and bear fruit in 4-5 years), the Mu-ma-huang, which is effective against the wind and the sand in the south (native to Australia; also known as Australian ironwood; good quality hardwood; suitable for mine props; source of staple fiber; rapid growth, approximately 1-2 cm per day), and the Wen-kuan-kuo, a wild oil-producing shrub (its nut, like the walnut, is 66% oil; grows more rapidly than the walnut; extremely good quality wood).

New planting techniques are also contributing to the growth of silvicultural products in China. For example, the cryptomeria intensive cultivation method, which represents 10 years of testing on a method that had been experimented by the masses, was adopted by the Lai-chou Silvicultural Testing Station in Fukien Province to grow cryptomeria forests 5-10 years faster than the ordinary cryptomeria forests. This was accomplished by selecting the appropriate forest land, careful soil preparation before afforestation,

selection of thick/healthy seedlings, appropriate close planting, careful tending, and rational thinning. The cryptomeria forests in Fukien Province, which formerly required about 25 years to mature, reached maturity in as early as 10 years under this new method (including the age of the sapling). The average height of the trees is 11 meters, their chest-high diameters are 12 cm and the volume yield of forests is 375 cubic meters per hectare.

The popular bamboo branch seedling cultivation method and the bamboo joint seedling cultivation method, which were discovered by the farmers of Hsin-hui Hsien in Kwangtung Province four years ago, are suitable for use in the cultivation of fascicular bamboo. The bamboo branch seedling cultivation method involves the selection of healthy bamboo as seed bamboo. The secondary branches from the seed bamboo is broken off around the third joint and planted obliquely in the seedling beds. For the bamboo joint seedling cultivation method, the seed bamboo is cut between the joints - one joint length for the thick lower and central portion of the seed bamboo and two joint length for the slender upper portion. While protecting the buds on the joints, horse-ear slits are made above and below the joints at opposing angles and the slitted portions of the seed bamboo are planted in the ground. Since the root germination rate of seedlings is active, growth is rapid and the survival rate is normally about 90%.

At the recent National Forestry Workers Conference, which was held in Peiping, recommendations were made for the adaptation of a number of effective grafting techniques and hope was expressed for the extensive popularization of these techniques in certain specific areas. These grafting techniques include the grafting of Suan-tsao to Ta-tsao, Mao-li to Pan-li, the grafting of tung oil trees and the grafting of poplar trees. These new techniques are being popularized in many mountainous and plains areas and evidence

proves that their results are excellent. Statistics from Shantung, Hopeh, Shansi and Peiping show that graftings of Suan-tsao to Ta-tsao have been accomplished on over 25 million trees. The grafted Pan-li forests in Kiangsu Province cover over 2,000 hectares. The 10 provinces and regions including Kwangsi, Kwangtung, Fukien, Hunan and Kweichow have successfully trial grafted tungoil trees. They have cultivated tung oil seedlings and prepared the parent stock and, this year, they are making preparations for large volume grafting.

Chinese grafting techniques have developed extensively over these past few years, the varieties of their grafted trees are gradually increasing and they are being popularized in many areas. The development and popularization of these grafting techniques are being watched with extreme interest because they represent one vital facet of Chinese development in silviculture hereafter incorporating volume, speed, magnificence and wastelessness.

An extremely ambitious third 5-Year Plan was initiated this year in China. From the standpoint of silviculture, this is also a grandiose program in the reconstruction of nature. The Chinese people's economy has been heightened overall and the material and technical bases for forestry construction has been further strengthened. The additional manpower of 650,000,000 people will, in the near future, undoubtedly attain complete "verdancification" of China and the transformation of the land into parks and forests.

Next 8 Page(s) In Document Exempt

Huge quantities of timber ~~being~~ from Kwangsi Chuang Autonomous Region in South China being floated out via the Hsi Chiang (Pearl River)

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Loading timber from the timber ~~yx~~ storage and processing plant~~xxxxxx~~ of the Ta-hai Forestry Bureau ~~xxxxx~~ in Heilungkiang Province

Forest railroad of the Greater Khingan Mountains Forest Area in Northeast China

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Newly installed selector-conveyor at the timber storage site of the Ken-ho Forestry Bureau of the Greater Khingan Mountains Forest Area in Northeast China. Practically all the operations of this forest area from felling to transport-out have been mechanized.

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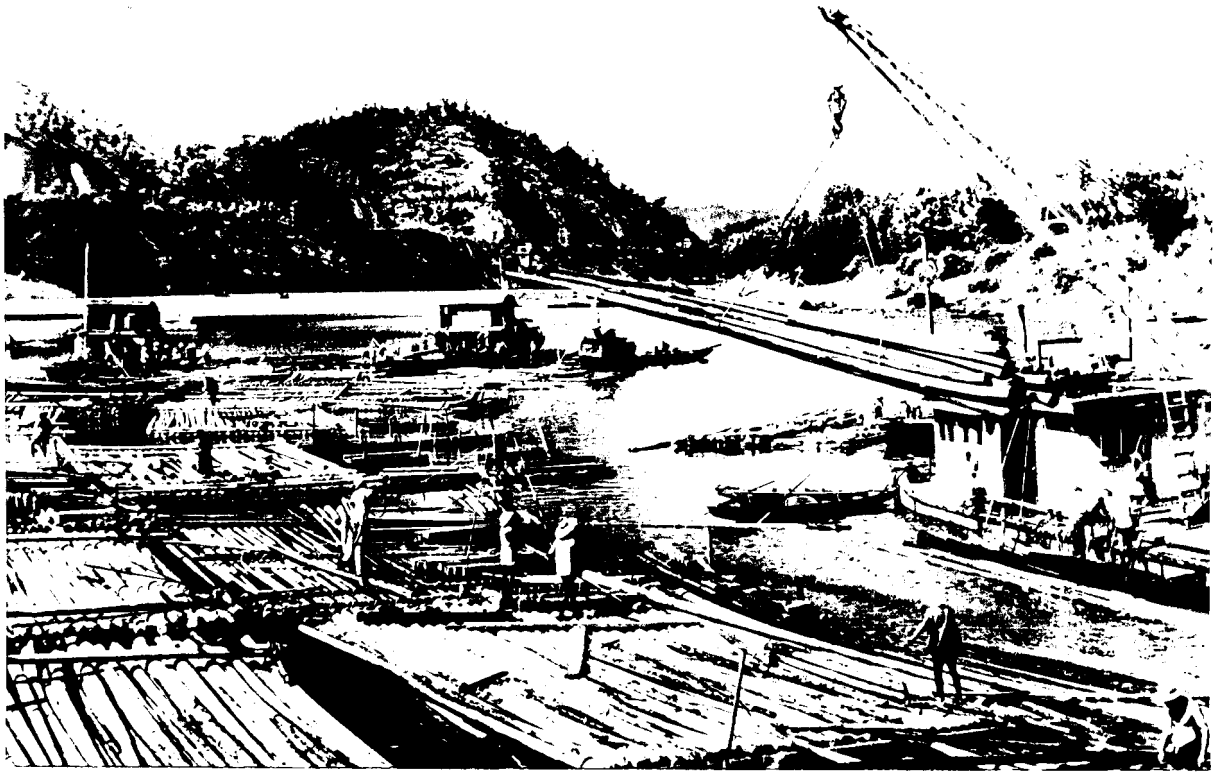
CHINA D-0497 KWANGSI PROV.
Formation of timber rafts headed for lumber mill on Hsi-chiang River.
Prior to 1966.
Confidential (1,18,29,30) CIA 1150772

25X1



CHINA C-0203 HEILUNGKIANG PROV.
Loading timber at timber storage & processing plant of Ta-hai Forestry Bureau. Prior to 1966.
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Confidential (18) CIA 1150773

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CHINA A-0203 HSING-AN LING SHAN-MO 50 48 N 126 30 E
Forest railroad. Prior to 1966. [redacted]
Confidential (1,27)

CIA 1150774

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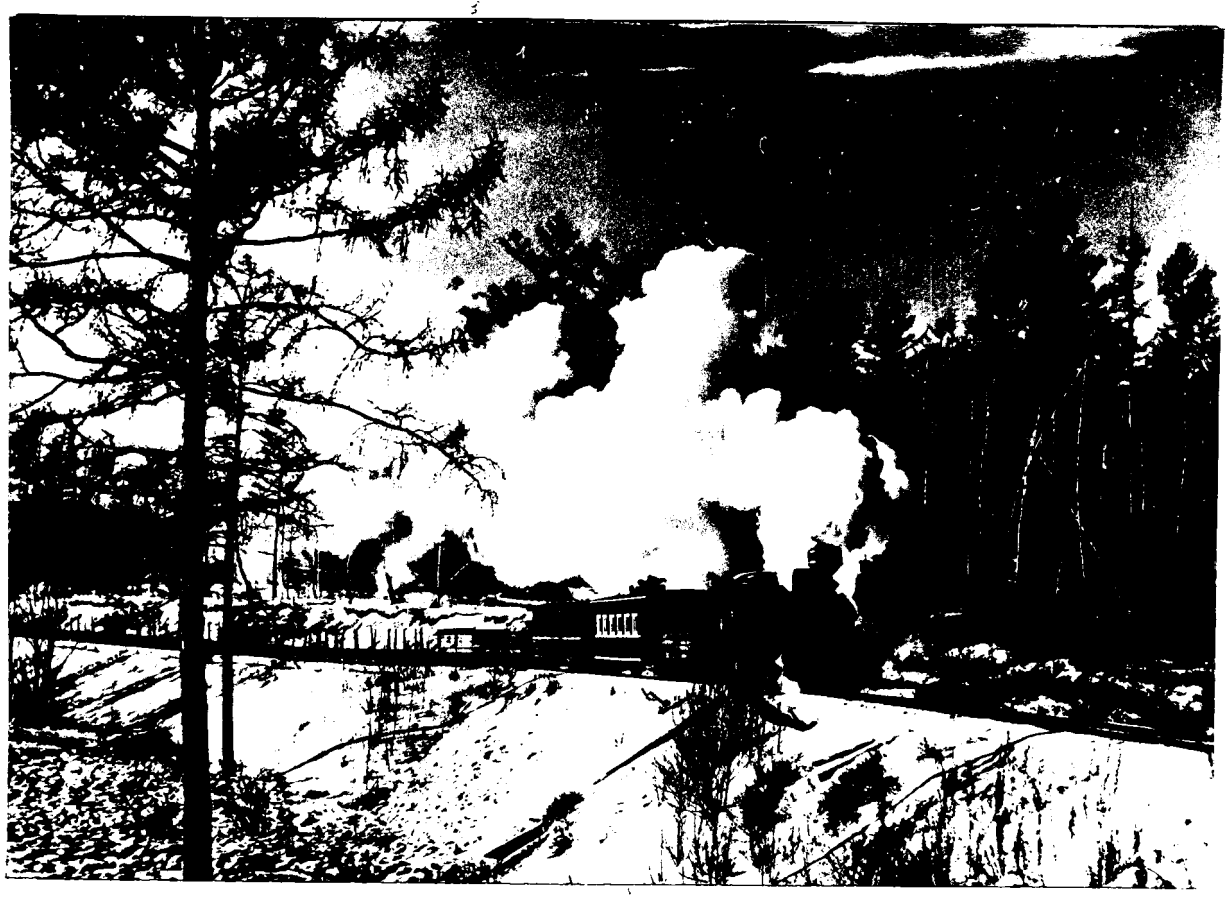
Approved For Release 2003/12/22 : CIA-RDP78-04546A003200030004-2

ILLEGIB



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CHINA A-0203 HSING-AN-LING SHAN-MO 50 48 N 126 30 E
Newly installed selector-conveyor at timber storage site of Ken-ho Forestry Bureau. Prior to 1966.
Confidential (18)

CIA 1150775

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Huge quantities of timber being floated out from the Min-k'ou Timber Procurement Station, Hsiu-ning Hsien, Anhwei Province, East China. Located in the southern sector of Anhwei Province, Hsiu-ning Hsien is mountainous, richly endowed with forest resources, and known as a timber collection and distribution center.

C-0493

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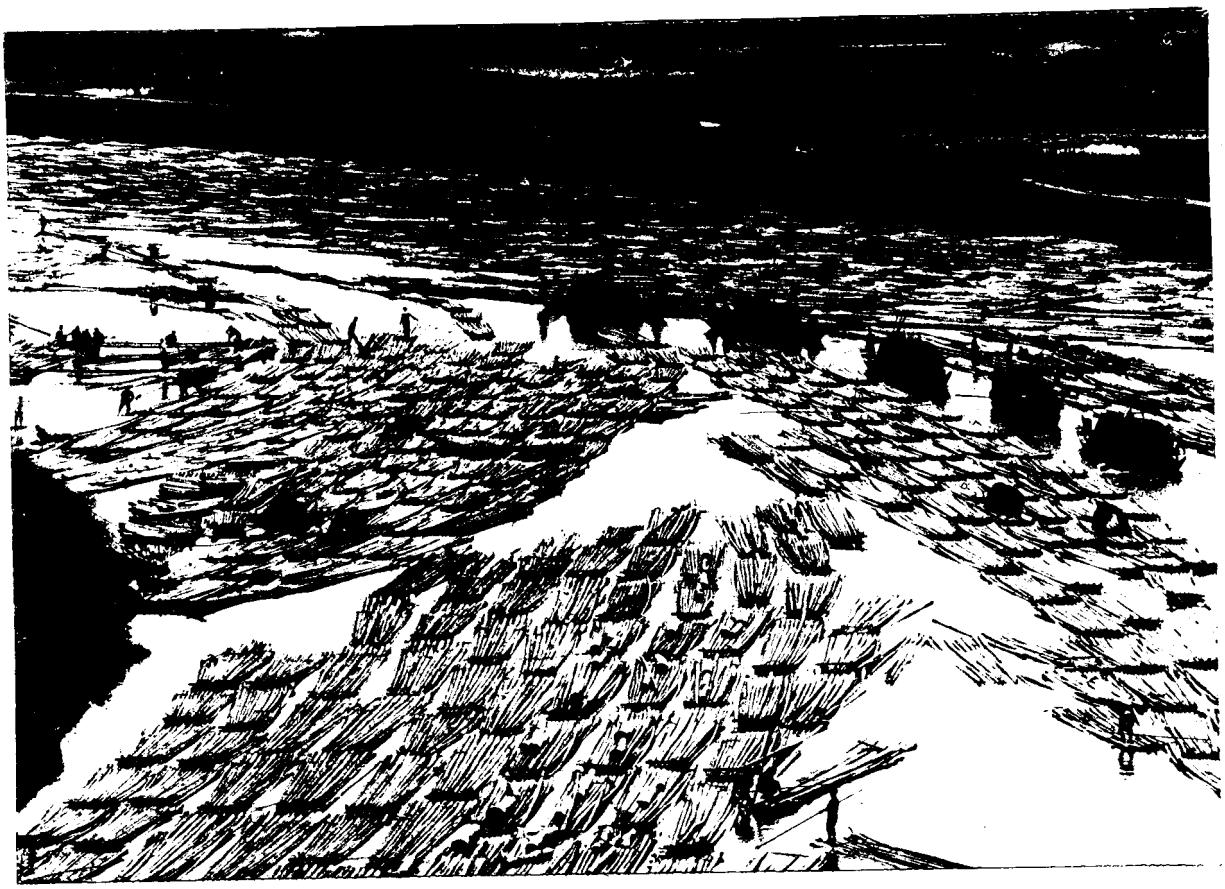
ILLEGIB



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